PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Applicant's or agent's file reference see form PCT/ISA/220	Date of mailing *(day/month/year)* see form PCT/ISA/210 (second sheet) **FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IB2005/051243	15.04.2005	20.04.2004

International Patent Classification (IPC) or both national classification and IPC
G11B7/12, G11B7/09

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notifed the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/IB2005/051243

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material:

   ☐ a sequence listing

   ☐ table(s) related to the sequence listing

   b. format of material:

   ☐ in written format

   ☐ in computer readable form

   c. time of filing/furnishing:

   ☐ contained in the international application as filed.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/IB2005/051243

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	3,6-12
	No:	Claims	1,2,4,5
Inventive step (IS)	Yes:	Claims	
	No:	Claims	3,6-12
Industrial applicability (IA)	Yes:	Claims	1-12
	No:	Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document:

D1: US -A- 6 442 110
D2 : JP -A- 11 120 610 & corresponding abstract

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 2, 4 and 5 is not new in the sense of Article 33(2) PCT.

2.1 D1 (cf. Figures 1-3)discloses an optical data storage system for recording and/or reading comprising
- a medium (11,12, 40, 82) having a cover layer (82, Figure 3) that is transparent (exhibit high transparency; cf. column 10, l. 6-10) to the focused radiation beam of a wavelength lambda,
an optical head including an objective (48) having a numerical aperture including a solid immersion lens (52) being adapted for presenting at a free working distance of smaller than lambda/10 (cf. column 10, l. 14-22, near-by field region) from an outermost surface of said medium, wherein the beam is coupled by evanescent wave coupling into the cover layer (82) during recording. The optical head comprises a first adjustable optical element (52) corresponding to the solid immersion lens (52), means (71) for axially moving the first optical element and dynamically keeping constant the distance between the cover layer (82) and the solid immersion lens (cf. column 9, l. 5-15), a second adjustable optical element (48, 51), means (69,70,72) for dynamically adjusting the second optical element (48, 51) for changing the focal position of the focal point of the focused radiation beam relative to an exit surface of the solid immersion lens (52).

Therefore, the features of claim 1 are known from D1.

2.2 The second optical element (51) is present in the objective (48).
Therefore, the features of claim 2 are known from D1.

2.3 Moreover, it is referred to D2 which discloses the dual actuator system (actuators 6 and 8) acting on the first adjustable optical element (solid immersion lens 9) and the second optical element (objective 7). These actuators allow for relative axial movement of the first and second optical elements, which are apparently electrically adjustable as claimed in claims 4 and 5 respectively. Thus, the features of claims 1, 2, 4 and 5 are known from D2.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 3 and 6-12 does not involve an inventive step in the sense of Article 33(3) PCT:

3.1 Nothing inventive can be seen in placing the second optical element (51) of D1 or element (7) of D2 outside the objective (52) as claimed in claim 3.

3.2 It appears to be obvious that the dual actuator system of D2 is operated by corresponding servo-loops as claimed in claim 6.

3.3 The dependent claims 7-12 appear to represent only standard solutions within the field of optical recording.

Re Item VII

Certain defects in the international application

The independent claims are not in the two-part form as required by Rule 6.3(b) PCT, whereby those features which in combination are part of the prior art (see D1 or D2) are placed in the preamble.

The documents D1 and D2 have not been identified in the description nor has the relevant background art disclosed therein been discussed. The requirements of Rule 5.1(a)(ii) PCT are, thus, not fulfilled.

Re Item VIII

Certain observations on the international application

It is clear from the description (cf. page 9, the last two lines, and Figures 7 and 9), from claim 4 and with respect to solving the posed problem (cf. the description, page 4, l. 6-8) that the following feature is essential to the definition of the invention:

- The second optical element is axially movable with respect to the first optical element.

Since independent claim 1 does not contain this feature it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

PATENT COOPERATION TREATY

REC'D 28 JUN 2005
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PCT

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Applicant KONINKLIJKE PHILIPS ELECTRONICS N.V.	

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Box No. I Basis of the opinion

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International application No.
PCT/IB2005/051243

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	3,6-12
	No:	Claims	1,2,4,5
Inventive step (IS)	Yes:	Claims	
	No:	Claims	3,6-12
Industrial applicability (IA)	Yes:	Claims	1-12
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2. Citations and explanations

see separate sheet

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see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document:

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